

We claim:

1. A device comprising an extracellular matrix having an internal pH between 4.0 and 6.0, wherein the extracellular matrix contains heparin or a heparin-related compound bound to a protein, wherein the protein has a pH dependent binding to the heparin or the heparin-related compound.
2. The device of claim 1, wherein the internal pH is between 5 and 6.
3. The device of claim 1, wherein the internal pH is about 5.5.
4. The device of claim 1, wherein the bound protein is VEGF.
5. The device of claims 1 or 4, wherein the extracellular matrix further comprises fibronectin or a fibronectin fragment that binds to the bound protein.
6. The device of claims 1, 4 or 5, wherein the extracellular matrix contains a heparin-related compound.
7. The device of claim 1, wherein the heparin-related compound is heparan sulfate or heparan sulfate proteoglycan.
8. The device of claims 1, 4, 5, 6 or 7, wherein the bound protein contains a heparin-binding consensus sequence.
9. The device of claim 8, wherein the heparin-binding consensus sequence is XBBBXXBX or XBBXBX, where B is a basic amino acid residue or His and X is any amino acid residue.
10. The device of claims 1, 4, 5, 6 or 7, wherein the bound protein contains a glycine-like box, wherein said glycine-like box is from about seven to twelve amino acids and contains at least two Gly residues and two-five basic amino acid residues.
11. The device of claim 1, wherein the glycine-like box is SEQ ID NO:1.
12. The device of claim 11, wherein the bound protein is VEGF₁₂₁ or VEGF₁₆₅.

13. The device of claims 1, 4, 5, 6, 7, 8, 9, 1- 11 or 12, wherein the device is formed in situ in a subject.
14. A kit for making the device of claims 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, or 13, wherein the kit contains a vial containing heparin or a heparin-related compound and a second vial containing fibronectin or a protein containing a heparin-bind domain.
15. The device of claims 1, 4, 5, 6, 7, 8, 9, 10, 11, or 12, wherein the extracellular matrix is attached to or encased within a compound selected from the group consisting of a film, a hydrocolloid, a hydrogel, a foam, a gelatin, a bead, a bandage, and a cellophane.
16. The method of claim 6, wherein the heparin-related compound is a heparin-related oligosaccharide of 8-16 sugars.
17. A method of stimulating angiogenesis at a clinically relevant site in a mammal, said method comprising administering an effective amount of the device of claims 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 15 capable of releasing a pharmaceutically effective amount of the bound protein at said clinically relevant site.
18. The method of claims 5 and 17, wherein said clinically relevant site is a wound and the bound protein is an angiogenic protein that promotes wound healing.
19. The method of claims 17 or 18, where the bound protein is VEGF.
20. The method of claim 19, wherein the VEGF is VEGF₁₂₁ or VEGF₁₆₅.
21. The method of claims 17, 18, 19 or 20, wherein the device is administered by injection or surgical placement.
22. The method of claims 17, 18, 19, 20 or 21, wherein the device is formed in the mammal in situ.